

REMARKS

Claim 21 is amended. Claims 22 and 26 are canceled. New claims 28-33 are presented. No new matter is added. Claims 21, 23- 25, and 27-33 are pending.

Specification and Drawings

The disclosure is objected to as including informalities. Specifically, the Examiner objects to the disclosure as failing to define the characteristic of a first and second portion of the data and how copying a first and second portion of the data through the data pipe in a first and second chunk in a first and second format based on the first and second characteristic is performed. Office Action, page 2. A similar objection pursuant to 37 C.F.R. § 1.83(a) is made to the drawings as well. Office Action, pages 2-3. Applicants respectfully refer the Examiner to the following description, among others, in the specification at lines 11-18 of page 27:

if the data that is to be sent from the first operating system 802 to the storage media 812 is data that begins in a text format, changes to streaming video format, and then to audio format, the data could be separated into chunks which should be stored in different storage media and in different formats. However, the data will be considered to have traveled through a single data pipe. Each chunk of the data that is sent to the storage media 812 causes the storage management system 800 to identify the characteristics of the chunk that has been sent as well as characteristics of the next chunk that is to be sent, thereby allowing the storage management system 800 to keep the data pipe that has been established.

The description above, among others, is one example in which characteristics of portions of data may be defined according to an aspect of the present invention. For example, a system in accordance with one embodiment of the invention may determine whether data is in text, streaming video, or audio format and separate the data into chunks which may be stored in different storage media or different formats. Some common examples of different storage media include, for

example, optical media, magnetic tape, hard drives, or other conventional storage media, each of which may have a storage format, or may be stored to in various copies, such as secondary copies, auxiliary copies, or other format. In some embodiments, different data types may be appropriate for particular storage media or storage formats, for example, as required by a system or user.

The above cited section, as well as other sections describing the DataPipe, such as at pages 5-11 and 13-17, and sections describing movement of chunks, such as at pages 26-33, describe copying a first and second portion of the data through the data pipe in a first and second chunk in a first and second format based on the first and second characteristic. Applicants also refer the Examiner to Figs. 7-13 which show various different structural embodiments that may be used to practice the claimed invention.

For example, Fig. 8, discussed on pages 26-27 of the application, (excerpt above), shows a storage management system 800 including a data mover 806 with OS interface module 814, encryption module 816, compression module 818, chunking manager 820, header/footer support module 821, other support modules 838, and including data mover 810 with media interface module 822, decryption module 824, decompression module 826, chunking manager 828, header/footer support module 830, and other support modules 840. These components may be used to copy data through a data pipe based on the characteristics of portions of data. For example, a software component, such as software application 804, storage mapping 808 or data mover 806 may select whether encrypt, compress or chunk data and make determinations regarding transmission of data. Further examples of defining characteristics of a first and second portion of data appear in other portions of the specification, including pages 28-33, for example, relating to headers and footers.

Reconsideration and withdrawal of the objection to the specification and drawings is respectfully requested in light of the remarks above.

Rejections Based on 35 U.S.C. § 102

Claims 21-27 are rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent 6,654,825 to Clapp et al. (“Clapp”). Although the claim cancellations and claim amendments are not believed to be necessary, claims 22 and 26 are canceled to facilitate prosecution of this application. Claim 21 is amended to more clearly point out the invention.

Clapp describes a video conferencing system that transfers video data from a source to a host computer via a static data pipe 82. A coordination instruction 500 relating to the data transfer includes data relating to a data block field 502, a lead data byte 504 and a logical unit number 506, and an ID 508. See, column 14, lines 8-46 of Clapp. Such coordination instruction information are used to identify a data item and determine where to display pixels of the transferred data.

By contrast, applicants’ invention provides for transfer of data, for data storage, storage operations, such as data archival, backup and recovery, or other storage purposes, from a source storage device to a destination storage device. The data may be transferred based on a characteristic of the data to be transferred, for example, a data type, or other characteristic, via one or more dynamic data pipes, which may be created for transferring data or chunks of data based on data characteristics, system resources, or other parameter. Applicants’ invention provides, among other things, the capability to transfer data items based on a data characteristic, e.g., type, for storage operations. Such a system provides flexibility in handling different types of data which may have different storage requirements. In addition, applicants’ invention describes creating a data pipe for data transfers based, at least in part, on a data characteristic, thus providing further flexibility in

performing storage operations, utilizing system resources and handling various storage requirements.

Claim 21, as amended, includes at least the following elements which are not described or suggested by Clapp.

generating a first header describing the contents of a first chunk, the first header including information on at least a first storage operation to be performed on the first chunk;

and

generating a second header describing the contents of a second chunk, the second header including information on at least a second storage operation to be performed on the second chunk.

Clapp describes transferring pixel data from a source to a host computer with pixel data processed in a particular manner, as explained for example, at col. 16, lines 7-10. The processing is described as “swap[ping] the position of specific color bits within the block of pixel data.” See, Clapp, col. 16, lines 16-18. Clapp provides no teaching, suggestion or recognition of storage operations including header information relating to performing a storage operation, or other action to be performed in connection with the data. Instead, Clapp merely specifies location information for transferred data.

A further distinction between Clapp and the inventions claimed in claims 30-32 related to creation of a data pipe for transferring data. Clapp describes a preexisting static data pipe for transferring data over a communication channel (82). There is no description in Clapp of dynamically creating a data pipe for a data transfer depending on system resources, data transfer requirements or other characteristic. Instead, Clapp includes a single communication channel which

cannot be dynamically configured or modified, which may lead to bottlenecks in data transfers, or other network problems.

Thus, for the above reasons, it is asserted that claim 21 is patentable over Clapp. Claims 23-25 and 27-33 include additional elements which further distinguish the invention over Clapp, and for at least the above reasons, are also patentable over Clapp. Reconsideration of the rejection of claims 21, 23-25 and 27-33 is respectfully requested in light of the remarks above.

The Commissioner is hereby authorized to charge any additional fees that may be required or credit any overpayment to deposit account no. 02-4270.

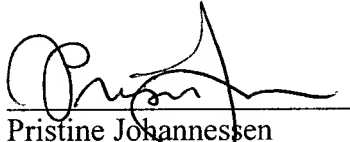
Respectfully submitted,

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I hereby certify that the correspondence attached herewith is being transmitted via First Class Mail to the Commissioner for Patents, Alexandria, VA 22313


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